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| | First Inventor | ANDOH |
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| | Examiner | Mellon, David C. |
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Commissioner for Patents
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SIR:

I, Robert Yaw Gyamfi Andoh, of 32 Vista Drive, South Portland, Maine, 04106, USA, formerly of 68 Glamorgan Close, Mitcham Surrey CR4 1XH GREAT BRITAIN, declare as follows:

1. My educational and relevant work background are as follows. I have a BSc in Civil Engineering, an MSc in Public Health Engineering and a PhD in Urban Water Engineering Systems. I am also a visiting Professor of Liverpool John Moores University in the UK, a member of the Wisconsin Department of Natural Resources' Technical Steering Committee and serve on the Technical Advisory Board for the University of New Hampshire's Stormwater Center both in the USA. I am a Fellow of the Chartered Institution of Water and Environmental Management and have more than 25 years experience in the Water Industry with over 17 years of experience working for Hydro International plc, a specialist supplier of water management technologies, where I have been a Board director since 1997 and currently hold the position of Chief Technology Officer. I worked in Civil Engineering consultancy for a number of years prior to joining Hydro International. I have particular expertise in the field of urban drainage and the development of hydrodynamic technologies for urban water management and have published a wealth of papers and articles on this subject. I am also a named inventor on several related patents.

2. I am a co-inventor in respect of US Patent Application Serial No 10/562681 (the present application), which is the national stage of International Patent Application PCT/GB2004/002773. I am also a co-inventor of International Patent Application PCT/GB00/01482, published as WO00/62888 (hereafter the "Andoh WO reference").
3. I am informed that the Examiner at the US Patent and Trademark Office has expressed the view that the Andoh WO reference discloses an inner separation region constituted by the interior of the tubular member 10, and further states that this inner separation region is annular and may be closed at a lower end thereof. The basis for this latter view, as I understand it, is that the Andoh WO reference discloses a conical member 9, and it is stated on page 12, lines 18 to 22 of the Andoh WO reference that "the conical member 9 may be either solid or hollow (as shown)". It appears to me that the Examiner is interpreting the possibility of the cone 9 being "solid" as meaning that it would extend inwardly of the tubular member 10 to a cone vertex, and consequently would block the lower end of the tubular member 10.
4. This is not how, in my opinion, one of ordinary skill in the art in the field of hydrodynamic treatment devices, would understand the variant envisaged by reference to the possibility of the cone 9 being "solid". In the Andoh WO reference (see especially Figure 3) the cone 9 is shown in the form of a flared sheet metal extension in the form of a skirt at the bottom end of the tubular member 10. It is this configuration of the cone 9 which is suggested by the term "hollow". It is, however, well known in such devices for conical flow-modifying members to have a "filled-in" configuration, for example as is shown in GB 2082941, referred to at line 32 on page 12 of the Andoh WO reference. Thus, in such a configuration, the conical component is made up of a conical sheet, a base and a tubular central element which together form the complete cone having a central passage, defined by the tubular element. This is what those of ordinary skill would understand to be a solid body as envisaged in the Andoh WO reference, in that the elements of the cone form a closed volume.

5. It is, however, important to note that the tubular element of the conical body forms a passage through the body. The purpose of this passage is to provide access to the underlying sump (12 in GB 2082941) so that it can be cleaned. Hydrodynamic separators of the kind with which the present invention is concerned are commonly used to remove solid material from storm water or sewage flows, and the solid materials which enter the sump for subsequent removal are often of an adherent nature and can accumulate within the sump. Consequently, the sump needs to be cleaned from time to time, and it is usual for this cleaning operation to be performed from the top of the vessel, access to the sump being provided through a central pathway. In the case of the separator shown in GB 2082941, this pathway includes the interior of the tubular element 18, while in the Andoh WO reference it is achieved through the interior of the tubular member 10.
6. It would not be apparent to the ordinary skilled person that any modification of the cone 9 would eliminate the access to the sump 7. The ordinary skilled person would, therefore, interpret the reference to a "solid" cone as being to a cone having a central opening, in the manner shown in GB 2082941. Consequently, the ordinary skilled person would not understand a "solid" cone in the Andoh WO reference as closing the lower end of the tubular member 10.
7. The Examiner has also suggested that the Andoh WO reference discloses an annular inner separation region, on the basis that the interior of the tubular member 10 is "round". The understanding of the word "annular" to an ordinary skilled person is that it means ring-shaped. Consequently it would not be appropriate to describe a region which is cylindrical and extends all the way from the axis to an outer wall as "annular". Consequently, it is my opinion that the ordinary skilled person would not consider the interior of the tubular member 10 of the Andoh WO reference to be "annular".
8. It is consequently my view that the Andoh WO reference fails to disclose to the ordinary skilled person an annular inner separation region; and, even if a "solid" cone

9 is employed, the ordinary skilled person would not consider the resulting cone to close the lower end of the tubular member 10.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and patent issuing thereon, or any patent to which this verified statement is directed.

Robert Yaw Gyamfi ANDOH



November 2, 2009